



MANUFACTURER'S  
GUIDELINES FOR  
INSTALLATION OF THE

## TUFMAN® PREMIUM MANIFOLD



TufMan Premium Manifolds are manufactured from Luran® S, which is the brand name for BASF's unique styrene acrylonitrile copolymer (ASA) that has been impact-modified with acrylic ester rubber. Luran® S is the stand-out material for this type of application because of its high thermal stability, excellent resistance to UV and the effects of weather on ageing and long-term retention of properties, and good resistance to chemicals.

TufMan Manifolds have been designed to be used as part of unglazed strip-collector solar heating systems for domestic and commercial or public swimming pools. All systems using TufMan Manifolds must comply with AS 3634-1989: Solar Heating Systems for Swimming Pools, and industry best practice. The use of TufMan Manifolds are intended for solar swimming pool heating systems and contrary use may not be recommended by the manufacturer.

Recent amendments to the National Plumbing and Drainage Standard (AS/NZS 3500.2), and advisory announcements from National Plumbing Regulators now accept the long-standing industry practice of solvent cement jointing of PVC-U to ABS/ASA pipes and fittings. The TufMan Manifolds have been designed, and are manufactured under strict process conditions, to minimise the potential of solvent-induced stress cracking. Whilst some of the aggressive solvents used in commercial PVC-U solvent cements have been shown to adversely affect the joint strength of ABS/ASA to PVC-U or ABS/ASA to ABS/ASA pipes and fittings, the manufacturer of TufMan Manifolds recognises this practice as acceptable as long as the following precautions are strictly adhered to.

**Failure to adopt these recommendations may result in the product warranty being void.**

## MANUFACTURER'S GUIDELINES FOR INSTALLATION OF THE TUFMAN PREMIUM MANIFOLD

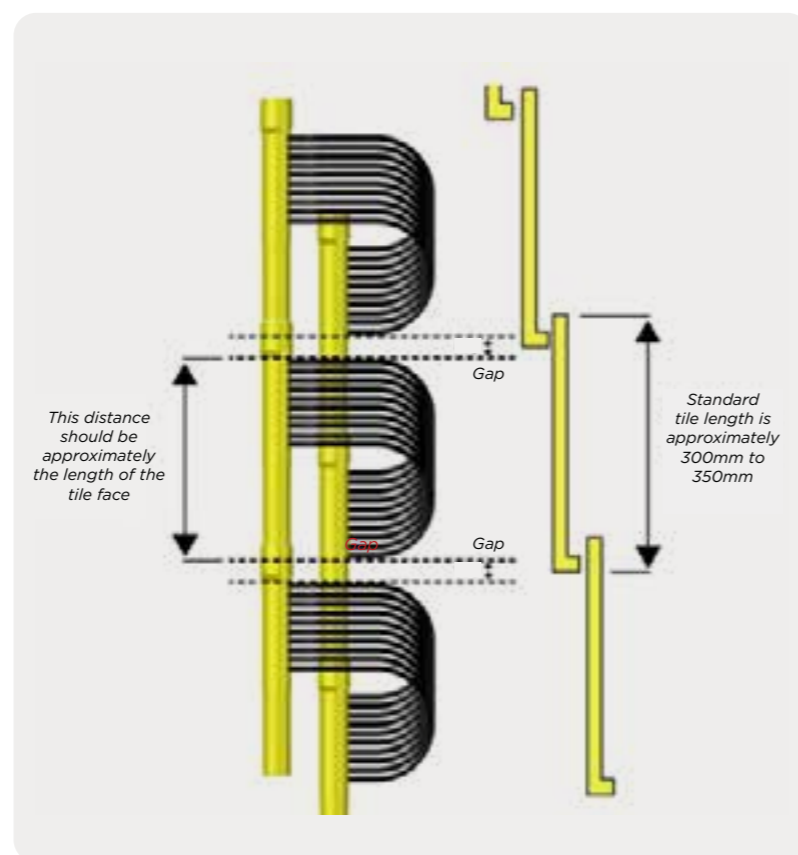
### STEP 1

#### Manifold Lengths vs. Strip Spacing

The length of the moulded manifold has been specifically designed to fit the spacing of standard roof tiles (between 300 and 350mm).

Roofs with tiles smaller than standard roof tiles may need to trim the male end of the manifold. This is to ensure the collector is sitting on the flat (or terrace) of the tile, not over the step between tiles (see the below image Manifold Length vs. Strip Spacing).

On metal roofs the male end of the manifold can be trimmed shorter to reduce (or eliminate) the gap between each run of strip collector. Installers should try to minimise the gap between collector runs, without overlapping them.



### STEP 2

Trim the manifold (using the moulded ribs as a guide) and thoroughly de-burr/clean edges. If you are connecting the TufMan® Manifold to PVC pipes or fittings, apply primer to the PVC-U components only.

**Do not apply solvent primer on the TufMan® Manifold or any other ASA component.**

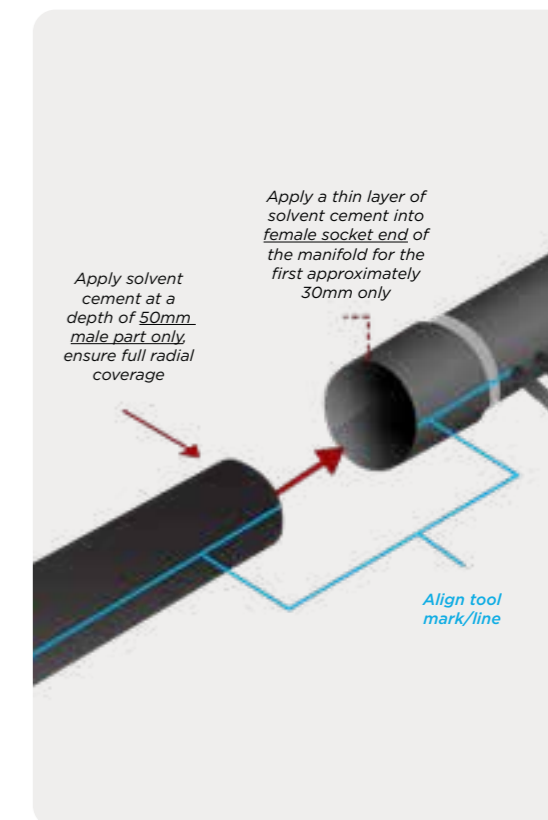
### STEP 3

- Apply only a THIN layer of solvent cement into the FEMALE socket end of the TufMan manifold for the first approximate 30mm only, then immediately apply ample solvent cement to the MALE component/s for the full 50mm length or five divisions on the TufMan. This procedure is to ensure adequate bond surface is achieved for both surfaces while eliminating the possibility of excess solvent cement beading on the internal transition joint.

- On the male end only, ensure total coverage and sufficient wet cement to fill the gap between the male fitting and the female fitting.

- Insert the male end into the female socket immediately after the solvent cement is applied, note assembly of male and female must be made while the male and female solvent cement surfaces is still wet and fluid. Quickly align the longitudinal marks and ensure that the full five divisions are inserted into the female socket. Hold together long enough to ensure retention.

- Refer to the solvent cements manufacturer's instructions and recommendations in conjunction with the above TufMan procedures.



### STEP 4

Once retained, ensure the external excess bead of solvent cement is wiped away with a clean cloth to help prevent cement induced stress cracking. Wait 24 hours for the solvent cement to dry fully before pressurizing the system with water.

#### Mounting and Connecting

It is important that the TufMan manifold system and its supply and return connecting pipes are securely installed onto the roofs surface in order to resist induced external forces such as wind etc however the entire system must also be installed to allow for all thermal movements (TufMan and connecting pipes) without inducing longitudinal or lateral stress being applied to the TufMan manifold system. An easy and effective method of pipe and manifold mounting is the use of one or more of the below Boss Solar Installation Accessories:

Part No:	Part Description:	Image
272_614	Manifold Tray 1.2m - Black Powder coat (Tile & Metal Roofs)	
045_0330 045_0336	Tufman EzyClip - Black (Metal Roofs) or; Tufman EzyClip - White (Metal Roofs)	
045_1615	EzyTie Header Mounting System (Tile Roofs)	